

MIO 0057 PA
Serial No. 09/904,112

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Sub 7
C1
B1

1.(Amended) A method of forming a capacitor comprising providing a conductive oxide electrode, depositing a first layer of a high dielectric constant oxide dielectric material on said conductive oxide electrode, oxidizing said conductive oxide electrode and said first layer of said high dielectric constant oxide dielectric material under oxidizing conditions such that at least the surface of said conductive oxide electrode is provided with enough oxygen to provide stability with said first layer of high dielectric constant oxide dielectric material, depositing a second layer of said high dielectric constant oxide dielectric material on said first layer of said high dielectric constant oxide dielectric material, and depositing an upper layer electrode on said second layer of said high dielectric constant oxide dielectric material.

B2
Sub 7
C2

11. (Amended) A method of forming a capacitor comprising providing a conductive oxide electrode, depositing a first layer of a high dielectric constant oxide dielectric material on said conductive oxide electrode, oxidizing said conductive oxide electrode and said first layer of said high dielectric constant oxide dielectric material under oxidizing conditions, depositing a second layer of said high dielectric constant oxide dielectric material on said first layer of said high dielectric constant oxide dielectric material, depositing an upper layer electrode on said second layer of said high dielectric constant oxide dielectric material, depositing a gas permeable electrode on said upper layer electrode, and oxidizing said upper layer electrode through said gas permeable electrode.

Sub 7
C3
B3

15.(Amended) A method of forming a capacitor comprising providing a conductive oxide electrode, depositing a first layer of a high dielectric constant oxide dielectric material comprising Ta₂O₅ on the conductive oxide electrode, oxidizing said conductive oxide electrode and said first layer of said high dielectric constant oxide dielectric material under oxidizing conditions such that at least the surface of said conductive oxide electrode is provided with enough oxygen to provide stability with said first layer of high dielectric constant oxide dielectric material, depositing a second layer of said high dielectric constant oxide dielectric material on said first layer of said high dielectric constant oxide dielectric material, oxidizing said second layer of said high dielectric constant oxide dielectric material, and depositing an upper layer electrode on said second layer of said high dielectric constant oxide dielectric material.

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B4
Sub C4
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28. (Amended) A method of forming a capacitor comprising providing a conductive oxide electrode, depositing a first layer of a dielectric material comprising Ta_2O_5 on said conductive oxide electrode, treating said conductive oxide electrode and said dielectric material under oxidizing conditions such that both said conductive oxide electrode and dielectric material are oxidized and such that at least the surface area of said conductive oxide electrode is provided with enough oxygen to provide stability with said first layer of dielectric material, depositing a second layer of a dielectric material comprising Ta_2O_5 on said first layer of said dielectric material, oxidizing said second layer of said dielectric material, crystallizing said second layer of said dielectric material, and depositing an upper layer electrode on said second layer of said dielectric material.

Sub C5
B5
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40. (Amended) A method of forming a capacitor comprising providing a conductive oxide electrode selected from the group consisting of RuO_x and IrO_x , depositing a first layer of a dielectric material selected from the group consisting of Ta_2O_5 and $Ba_xSr_{(1-x)}TiO_3$ on said conductive oxide electrode, oxidizing said conductive oxide electrode and said first layer of said dielectric material with a gas plasma such that at least the surface area of said conductive oxide electrode is provided with enough oxygen to provide stability with said first layer of dielectric material, depositing a second layer of said dielectric material on said first layer of said dielectric material, depositing an upper layer electrode on said second layer of said dielectric material, and oxidizing said upper layer electrode.

Sub C6
B6
cont

100. (Amended) A method of forming a DRAM cell comprising providing a conductive oxide electrode, depositing a first layer of a high dielectric constant oxide dielectric material on said conductive oxide electrode, oxidizing said conductive oxide electrode and said first layer of said high dielectric constant oxide dielectric material under oxidizing conditions such that at least the surface area of said conductive oxide electrode is provided with enough oxygen to provide stability with said first layer of high dielectric constant oxide dielectric material, depositing a second layer of said high dielectric constant oxide dielectric material on said first layer of said high dielectric constant oxide dielectric material, depositing an upper layer electrode on said second layer of said high dielectric constant oxide dielectric material, providing a field effect